**Research Paper**                                    **Nursing**

# Outcome of Nursing Intervention Guidelines on Knowledge And Practice Regarding Preventive Measures of Urinary Tract Infection in Patient With Indwelling Catheter Among Internship Nursing Students

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| **Mrs. Divya Patel** | P.G Student, Sumandeep Nursing College, Sumandeep Vidyapeeth Deemed University, Piparia, Vadodara |
| **Mr. Ravindra H N** | H.O.D., Medical Surgical Nursing, Sumandeep Nursing College, Sumandeep Vidyapeeth Deemed University, Piparia, Waghodia, Vadodara |
| **Mr. Kevin Christian** | Assistant Professor, Medical Surgical Nursing, Sumandeep Nursing College, Sumandeep Vidyapeeth Deemed University, Piparia, Waghodia, Vadodara |
| **KEYWORDS** | |

## INTRODUCTION

Urinary tract infections are a serious health problem affecting millions of people each year. Infections of the urinary tract are the second most common type of infection in the body. Urinary tract infections (UTIs) account for about 8.3 million doctor visits each year. Women are especially prone to UTIs for reasons that are not yet well understood. One woman in five develops a UTI during her lifetime. UTIs in men are not as common as in women but can be very serious when they do occur.

## NEED FOR THE STUDY

Urinary tract infection is an important cause of morbidity and mortality in Indian subjects, affecting all age groups across the life span. Though Escherichia Coli, which is normally present in the gastrointestinal tract, is the commonest causative organism, other gram negative colonic bacteria have been gaining prominence in India over the last two decades. Because of the proximity of the gut to the urinary tract, these organisms ascend through the urinary passage to the urinary bladder and the kidneys to produce infection.

Use of indwelling catheter is common in Intensive care unit, Urological wards. And even medical and surgical units. Catheter associated all risk factor, increase urinary tract infection as the duration of catheter use increase; the estimated risk for infection is at least 5% per day of catheterization. Among all risk factor, increased duration of catheterization is the greatest for development of a urinary tract infection.

## OBJECTIVES OF THE STUDY:

1. To assess the existing knowledge score regarding preventive measures of urinary  tract infection in patients with indwelling catheter among nursing students.

2. To assess the existing practice score regarding preventive measures of urinary tract infection in patients with indwelling catheter among nursing students.

3. To Develop and implement of nursing intervention guidelines regarding preventive measures of urinary tract infection in patients with indwelling catheter.

4. To assess the outcome of knowledge scores regarding preventive measures of urinary tract infection in patients with indwelling catheter among nursing students.

5. To assess the outcome of practice scores preventive measures of urinary tract infection in patients with indwelling catheter among nursing students.

6. To find an association between pretest knowledge scores of nursing students with their socio-demographic variables.

## RESEARCH HYPOTHESES

- H1- There will be significant difference in pretest and posttest knowledge level of internship nursing students on preventive measures of urinary tract infection among patients with indwelling catheter.

- H2: There will be significant difference in pretest and posttest practice level of internship nursing students on preventive measures of urinary tract infection among patients with indwelling catheter.

- H3: There will be significant association between pretest, knowledge scores of internship nursing students with their socio-demographic variables.

**Research design** - One group pre-test post-test design (Pre experimental Study)

**Research setting** - The research setting is Dhiraj General Hospital, Vadodara.

**Population** - Target Population: Internship nursing students

**Sampling Technique** - Non probability Convenience sampling technique

**Sample Size** - 60 Students

**Method of data collection** - Structured self-administered questionnaire and Self modified check list.

**Analysis and Interpretation** - Descriptive and inferential statistics

**Description of tool:**
Self-Administered questions consist of III sections

**Section A** Socio demographic variables consists of 8 items on socio demographic variables of internship nursing students

such as Age, Gender, Residential area, professional qualification, present placement area.

**Section B**- Knowledge Questionnaire consists of 22multiple choice questions to assess the level of knowledge of internship nursing students regarding preventive measures of UTI, introduction of UTI, removal of catheter, catheter care.

**Section C**- practice scale consist of 20 items to assess the practice regarding catheter care of internship nursing students using 2 point "yes" or "no".

### FINDINGS
Part I: Description demographic characteristic of the samplesDespite the majority 32(53.33%) responds belongs to the age group of 23 years of age while in the age group of 22 years 12(20%) responds belongs to this category also in the age group of 21 years 11(18.33%)and >23 years 05(8.33%) responds observed in this particular study. With regard of gender depicts the finding related to gender of the internship nursing students shows that higher response of the female 53 (88.33%) and were male 05 (11.66%) .Among the subjects students 30(50%) of them were having GNM qualification and 30(50%) were having B.Sc nursing qualification. There are 39% internship nursing students who were working in the critical ward, 23% working in MMW &FMW ward,23 working in MSW & FSW , 5% working in a pediatric wards, 5% working in a urology & nephrology wards ,and5% internship nursing students working in a other specify area of hospital during their past experience. Depict the analysis related to residential areas basis of information received by the respondents reveals that majority of 49 (81.66%) of the respondents was semi urban, 7(11.66%) of the respondents was rural as urban respondents 4(6.67%).

PART II: EVALUATION OF THE OUTCOME OF NURSING GUIDE-LINES REGRADING PREVENTIVE MESURES OF UTI. (N=60 )

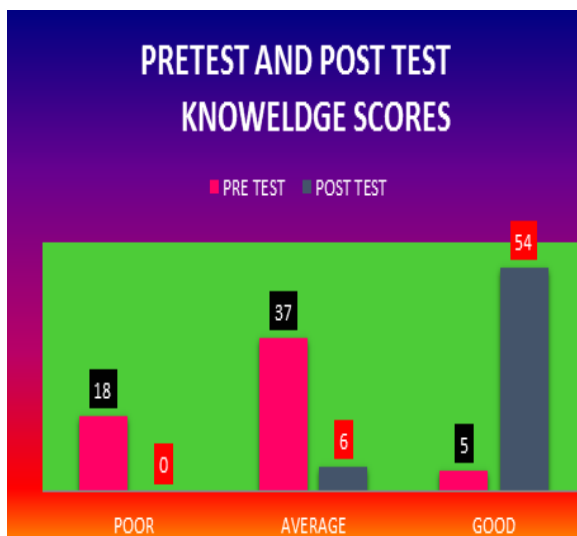### KNOWELDGE SCORE OF INTERNSHIP NURSING STUDENTS



**Figure No.1:Bar diagram representing Pre-test & Post-test Frequency Interpretation of Respondents.**

The data from the above table shows that scoring difference between pre-test and post-test. It shows that in pre-test among all internship  nursing students majority of 37(61.66%) internship nursing students scored average performance, 18(30.00%) scored poor performance, 5(8.34%) internship nursing students scored good performance In the post-test there was marked improvement in the knowledge of internship nursing students. In post-test score maximum 54(90%) internship nursing students scored good performance and6(10%) scored good performance.
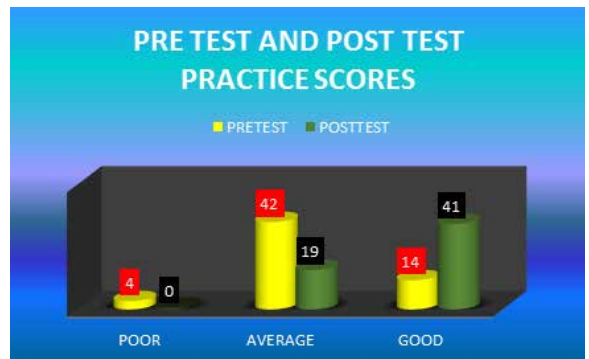
### PRACTICE SCORE OF INTERNSHIP NURSING STUDENTS



**Figure No. 2:Bar diagram representing Pre-test & Post-test Frequency Interpretation of Respondents.**
The data from the above table shows that scoring difference between pre-test and post-test. It shows that in pre-test among all internship  nursing students majority of 42(70.0%) internship nursing students scored average performance, 4(6.7%) scored poor performance, 14(23.3%) internship nursing students scored good performance In the post-test there was marked improvement in the practice of internship nursing students. In post-test score maximum 41(68.3%) internship nursing students scored good performance and19 (31.3%) scored average performance.

### PART III: TESTING THE RESEARCH HYPOTHESIS
Significant difference between pre-test and post-test knowledge and practice scores.Hypothesis was tested using paired't' test. The value of't' was calculated to analyze the difference in knowledge and practice of internship nursing student with their pre-test and post-test scores. The research hypothesis H1 & H2 was formulated to evaluate the outcome of the nursing guidelines on knowledge and practice regarding preventive measures of UTI.

Scores of respondents in pre-test and post-test. To find the significant difference between computed mean of pre-test and post-test knowledge and practice score, the paired't' test was calculated.

**H1 & H2**: the mean post-test knowledge & practice score of internship nursing students regarding preventive measures of UTI in patients with indwelling catheter will be significantly higher than mean pretest knowledge & practice score.

**II**. Association of the pre-test knowledge scores with selected demographic variables (N=60)

**H3**: There will be significant association between pretest, knowledge scores of internship nursing students with their socio-demographic variables

### III Association of Demographic Variable with the Level of Pre-Test Knowledge Score of Internship Nursing Students

Data shows that chi square values of demographic variables, Variables of age ( 2=5.77), Gender ( 2= 3.06), professional qualification ( 2=6.62), present placement area ( 2=13.7), residential area ( 2=2.97)was found significant at 0.05 level of significance , Thus it can be interpreted that there is a significant association between knowledge of  internship nursing students with their professional qualification, and there is no significant association between  knowledge of  internship nursing students with selected socio demographic variables such as age, Gender, present placement area, residential area. So we conclude that from the entire variable only one variable that is significantly associated with pre-test knowledge hence the hypothesis (**H3**) was accept with only professional qualification.

## CONCLUSION

In this study, there was a significant difference between pre test and post test knowledge and practice score among internship nursing students. So the nursing guidelines regarding preventive measures of UTI was effective. Hence, stated research hypothesis was accepted.

## REFERENCES

1.   Yilmaz N, Angus N, Yurts ever SG, Prevalence and antimicrobial susceptibility of Escherichia coli in outpatient urinary isolates in Izmir, Turkey. MEd Sci Monti. 2009 Nov; V.15 (11):P.I61-5.

2.   Diedier P, BenedettaA, Julie SR, Licum D. Clean care is safer care: the global patient safety challenge 2005 – 2006. International J of Infec Disease. 2006; 10: 419- 424.

3.   Kumin CM, Douthitt S, Dancing J, et al., The association between the use of urinary catheters and morbidity and mortality among elderly patients in nursing homes. Ann J epidemiol. 1992; 135:291- 301.

4.   Christensen JJ, Korner B, Kjaergaard H, APMIS (actapathologica, microbiological, et immunological Scandinavica), (1989), June 97(6), P539-546.

5.   Kehinde EO, Rotimi VO, Al-Hunayan A, Abdul-Halim H, Boland F, Al-Awadi KA, Journal of Endo Urology, (2004), Nov18(9), P 891-896.

6.   Werner GT, Gadomski M, Scheinert B, De Rehabilitation, (1998), May 37(2), P 64-67.

7.   Kunin CM, Chin QF, Chambers S, Journal of American Geriatrics Society, (1987) Nov35 (11), P 1001-1006.

8.   Okishio N, Hanai S, Ishiguro K, Yanaoka M, Tamai H, Naide Y, ActaUrologic Japonical, (1986), Nov 32(11), P 1610-1616.

9.   Czaja CA, Stamm WE, Stapleton AE. Prospective cohort study of microbial and inflammatory events immediately preceding Escherichia coli recurrent urinary tract infection in women 2009 Aug 15; V.200 (4), P.528-36.

10.  Homma Y, Araki I, Igawa Y, Clinical guideline for male lower urinary tract symptoms.Int J Urol. 2009 Oct; V.16 (10), P.775-90.